Engineering **Your** Success

BENCHTOP PRESSURE CONTROLLER

USER MANUAL

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ENGINEERING YOUR SUCCESS.

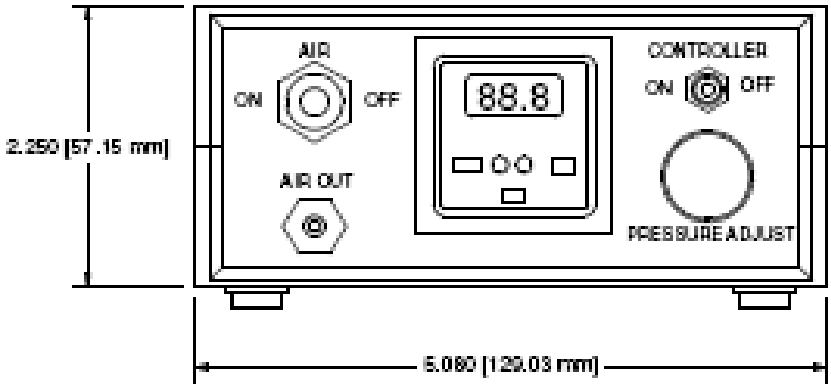
GENERAL DESCRIPTION

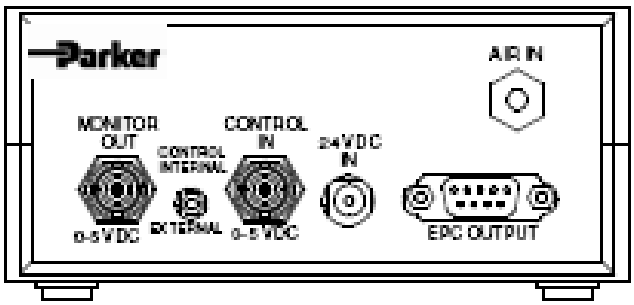
The Benchtop EPC is a device designed to allow for manual control of a pressure output via a simple adjustment control knob. Pressure control is accomplished by way of a VSOEP that is installed along with supporting circuitry to bring the control of the VSOEP to the user. This is intended to be used in a lab atmosphere or anywhere manual control of a pressure level is required.
The unit is user configurable to select internal control voltage control or external high resolution control. It has a monitor output for reading the sensor voltage out. There is an EPC power on/off switch. It has a gas output pressure on/off switch. It has the ability to control a secondary VSOEP in parallel with the internal VSOEP. There is a pressure out monitor meter for a visual feedback on the output pressure level. This is accomplished by way of a Parker Convum pressure meter mounted bulkhead style to the user interface.

ORDERING INFORMATION

This unit can be ordered thru Pneutronics using part number 990-5803-XXX. Consult applications application engineering for ordering assistance.

990-005803-015 = 0-15 psi
990-005803-050 = 0-50 psi
990-005803-100 = 0-100 psi





Benchtop EPC Test Set-up

Set the supply gas Pressure to 120% to 150% of the full scale rated pressure of the unit
For example on a 15 psig unit connect a supply gas pressure range to 18psig to 22.5 psig

Provide gas to the unit through the port labeled “Air In” on the Back Panel of the Benchtop Assembly.

Connect an external pressure meter or your application to the port labeled “Air Out” located on the Front Panel of the Benchtop Assembly.

Connect the 24V Power Supply to the port labeled “24 VDC IN” located on the Back Panel of the Benchtop Assembly and plug into the Wall Outlet.

Turn the switches for the “Controller” and the “Air” to the “ON Position” located on the Front Panel of the Benchtop Assembly.

Ensure the control switch located on the Back Panel of the Benchtop is in the “Control Internal” position to adjust output pressure using the potentiometer knob on the front panel.

Remote Control

If it is desired to use an external zero to 5 volt control signal to proportionally control the Benchtop pressure controller, position the “control” switch to the external position and supply a proportional zero to 5 VDC control signal to the “Control In” BNC connector.

The display should read the corresponding output pressure with the switch in either position

DISPLAY:

Pressure Sensor Programming

1. On the Pressure Sensor, select Mode (⇨⇨) and the Up Arrow (⇧) at the same time until the display reads "OUT 1".
2. Select Mode (⇨⇨) until the display reads "OUT 2".
3. Select Mode (⇨⇨) until the display reads "PA", "PS", "BA", or "F9"
4. Select Mode (⇨⇨) until the display reads "---".

Specifications

Pressure Range		Vacuum (V)	Positive (P)	Compound (R)
Units of Measure Display Resolution		bar: 0.001 kPa: 0.1 mmHg: 1 inHg: 0.1	bar: 0.01 MPa: 0.001 kgf/cm²: 0.01 PSI: 1	bar: 0.01 kPa: 1 kgf/cm²: 0.01 PSI: 0.1
Media		Air and Non-Corrosive Gases		
Pressure Port		**(N)** 1/8" NPSF (Consult Factory for BSPP or BSPT Port)		
Proof Pressure		**(V)** 145 PSI, **(P)** 217.5 PSI, **(R)** 145 PSI		
Operating Temperature		32 to 122°F (0 to 50°C)		
Storage Temperature		14 to 140°F (-10 to 60°C)		
Humidity		35 to 85% RH		
Electrical Connection		**(C)** 4-Pin, M8 Connector, **(G)** Grommet Open Lead		
Power Supply		10.8 to 26.4VDC, Ripple Vp-p 10% Max., Reverse Voltage Protection		
Display		3-Digit, 7-Segment LED		
Display Refresh		.1 to 3.0 sec. (Factory set at 0.1)		
Output Circuit		NPN (Sinking), PNP (Sourcing) Open Collector Transistor, 30VDC, 125mA		
Switch Output		Output Signal, NPN or PNP, Normally Open or Closed, LED Indicator		
Output Modes		Hysteresis or Window Comparator		
Output Response Time		< 2ms, 32, 256, 512ms Programmable (Factory set 2ms)		
Repeatability		± 0.2% F.S.		
Analog Output	Current Output	Output Current: 4 to 20mA Linearity: ±0.5% F.S. or less Maximum Load Impedance: 300Ω with power supply voltage of 12V; 600Ω with power supply voltage of 12V; Minimum Load Impedance: 50Ω		
Thermal Error		1% over ±25°C (77°C) Temperature Change: Range 32 to 122°F (0 to 50°C)		
General Protection		IP40, CE Marked, EMC-EN55011 Class B, EN 50082-2		
Current Consumption		< 70mA		
Vibration Resistance		10 to 55Hz, 1.5mm, XYZ, 2 hrs.		
Shock Resistance		10 G, XYZ		
Material		**Housing:** Polycarbonate, **Pressure Port:** Zinc Die-cast		
Mass		1.7 oz. (45g)		

ENVIRONMENTAL:

Operating Temperature:	0°C to 50°C
Storage Temperature:	-40°C to 65°C

ELECTRICAL:

Power Requirement:	+24 VDC - Power supply provided
Current Requirement:	DC 400 ma Maximum
Input Impedance:	≥ 30K ohms

PNEUMATIC

Supply Media:	Filtered, un-lubricated air (Consult factory for other gases)

Do not use corrosive or flammable gasses or liquids
Serious injury or death may result

Pressure Output Ranges:	0 – 15, 50 and 100 PSIG (per device specified)
Minimum Supply Pressure:	120% of rated full-scale pressure
Max Supply Pressure:	150% of rated full-scale pressure
Recommended Filtration:	43 Micron

Pneumatic Connection:

10-32 UNF-2B Female input and output Threads are provided to accept a variety of fittings

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